TICCIH Bulletin

The International Committee for the Conservation of the Industrial Heritage

NUMBER 75

1st quarter, 2017

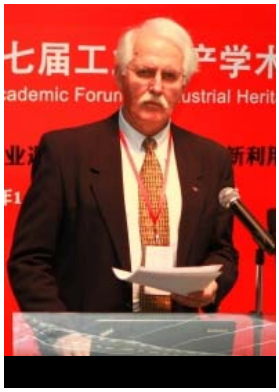
CONTENTS

The giant Resita steel mill in Rumania, partly shut down in 2002. The last blast furnace is the fifth generation on the same site, with three Cowper preheating stoves, raw materials silos and plumbing all declared historical monuments since 2003. See **Oana Ţiganea's report** on conserving Communist heavy industry. Photo: Viktor Mácha

OPINION

GREETINGS FROM PATRICK MARTIN, TICCIH PRESIDENT

Patrick Martin



I am pleased to introduce this 75th edition of the TICCIH Bulletin and to offer some recent news regarding TICCIH operations and Industrial Heritage in general. First, I consider this edition to be something of a milestone, prepared by our dedicated Editor James Douet, only the latest in a stream of excellent publications. Thank you, James!

I am very happy to report that starting now you can access most of the TICCIH Congress Proceedings online. Working with my University Library, particularly with Chad Arney and Annelise Doll, we have scanned and used optical character recognition software to help optimize searches. Eleven volumes, beginning with the 1973 Congress,

OPINION

are universally accessible and mounted on servers through **BEPress and SelectedWorks**. From this platform, you can search, download, print and share an incredible array of presentations from the past forty-plus years of TICCIH scholarship. In this open source format, we expect that searches on a full range of sites and topics should reach researchers in ways not possible in the past. We also intend to ultimately mount a full run of the Bulletins in this format.

In additional publication news, the Taylor and Francis Group, owners of Routledge Press, the current publisher of Industrial Heritage Re-Tooled, has entered into a contract with Tsinghua University Press to generate and market a Chinese translation of our book. This press operates from the home university of our Board Member Professor Liu Boying, who is overseeing the process. We are very excited to see this book reach a much larger market by way of this translation. The translation was announced at the recent 7th Chinese Industrial Heritage Conservation Annual Academic Conference, held in Shanghai during November 2016, and described elsewhere in this issue of the Bulletin.

My trusty colleague Don Durfee has retired from his positions with TICCIH and SIA, and has moved to Oregon with his recently retired wife Dr. Mary Durfee. I will miss him immensely, and wish him the best in this new phase of life. Meanwhile, we have been fortunate to employ Daniel Schneider to replace Don. Daniel is a graduate of the Michigan Tech MS in Industrial Archaeology program, and will be working with both TICCIH and the Society for Industrial Archeology, as Don did. Daniel has already gotten off to a great start, and we can be assured that operations will continue smoothly. Daniel can be reached directly at **ticcih@mtu.edu** or through **www.ticcih.org** for questions on membership, renewal or news for the Bulletin or the TICCIH website.

In the period 10-15 December, ICOMOS will hold their 19th General Assembly in Delhi, India. TICCIH India's National Representative, Moulshri Joshi, is involved in organization and has extended an invitation to TICCIH to hold a session within the larger Assembly, as well as a meeting of our Asian regional colleagues. I personally find this a very attractive invitation, and the Board will be working to take advantage of the opportunity.

Finally, I want to make you aware that TICCIH has been collaborating with a Heritage Alliance consisting of over 35 international heritage organizations through our friends at Europa Nostra to generate support for an upcoming European Year of Cultural Heritage. As things take shape, we will share information and opportunities through the website and the TICCIH Bulletin.

With best wishes for 2017.

REPORT

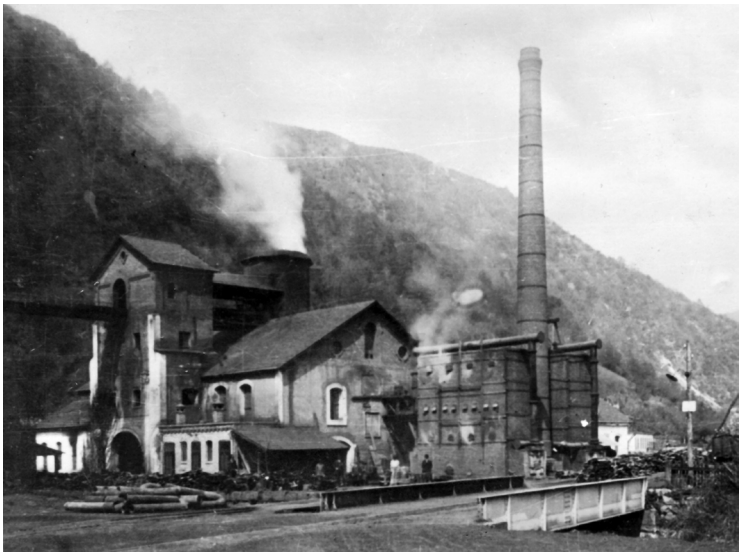
ROMANIA

COMMUNISM'S STEEL GIANTS

Oana Țiganea,
2016-2017 NEC Fellow (New Europe College, Bucharest)

Romania went through extensive territorial transformations during the communist regime from 1945 to 1989, due to the intense industrialisation-urbanisation process of socialist 'hyper-industrialisation'. Heavy industry was a national priority for investment. With its main focus on the steel industry, this was meant to shape territories and mentalities, creating what socialist propaganda named the 'Cult of Steel'.

However, the steel industry was already present in Romania since the late 18th century, with the majority of its production sites in Transylvania, Banat and Bucharest. During the late 1940s-early 1950s, the years of the initial consolidation of the socialist regime, the first



Govăjdia blast furnace, Hunedoara, in 1890. The furnace is a protected, if neglected, monument. Photo: Pilu Găină, Wikipedia Commons

investments were directed towards these steel plants. Soon after, from 1959, a new industrialisation phase began guided by principles of uniform territorial placement and diversification of the overall industrial production.

Between all the types of steel industries which developed on the Romanian territory throughout socialism, one in particular differentiated itself in terms of territorial impact, the complexity of the industrial production line, and the diversity of inherited built environment, leading to the integrated production sites or steel plants mentioned in the specialist literature. The latter refers to a wider territory than the industrial site itself, based on the industrial flow from the raw material supply, processing and transportation, to their effective transformation in end products.

Two integrated steel plants already existed in Romania before the socialist industrialisation phase: Reșița Steelworks (1793 – 2001/2002, and still partially functioning) and Hunedoara Steelworks (1884 - 1999). Even though both sites were substantially expanded during the socialist years, investment was uneven. In fact, the State's interest was directed more towards Hunedoara, which quickly became a 'national priority investment' with particular attention to the site's enlargement, technological upgrade, diversification of the steel production, and the construction of an industrial town. Thanks to this focus, Hunedoara increased tenfold, from 7,000 inhabitants in 1947 it had grown to some 100,000, nearly a quarter of them steelworkers, in 1989.

Hunedoara is a paradigm of the recent Romanian industrialisation, representing an experimentation ground for planning and designing industrial architecture, whilst centralisation and political control of the architectural practice dominated all other aspects. Some of the industrial architecture reference points at national level were designed and built at Hunedoara Steelworks, illustrated during the mid-1960s as examples of monumental industrial design. This was the case of the Siemens-Martin furnaces (1953 – 1958) and the Rolling Mill Sector (1953 – 1974).

Hunedoara Steelworks is mentioned also as a territorial planning model in reference to other integrated steel plants, such as the huge **Galați Steelworks** (1960 – currently ArcelorMittal Galati and still manufacturing steel), built from scratch during the socialist years. Galați surpassed Hunedoara in matters of steel output and territorial impact, becoming by the end of the communist regime the greatest and the largest Romanian steel 'giant', as it was called by the regime's propaganda. This is the only integrated model still functioning in its entirety

Simultaneously, cultural heritage safeguarding was re-opened in Romania. The first historic monuments list was made in the early 1990s, followed in 2001 by the first national normative act. During this first territorial recording, industrial heritage elements were taken into consideration such as the blast furnace of Reșița Steelworks (1771 – 1990s) or the Govăjdie blast furnace (1806 – 1924), 10 km from Hunedoara. This initial recording, which remains the base of the current Historic Monuments List, was directed towards the pre-socialist industrial development considered of exceptional value, and individual (decontextualized) elements. None of the large steel industrial sites were assessed for their overall heritage value, from the perspective of the complex steel production flux, the diversity of the built environment or their territorial and socio-cultural impact. Meanwhile, large post-industrial territories disappeared.

Hunedoara Steelworks. The former open-air coal deposit on the perimeter of the site (top) and the first thermo-electrical plant (above), which opened in 1915 and was extended during the mid-1960s. Not protected, and used as a joinery plant. Photos: Paolo Mazzo, July 2013

STEEL GIANTS, Cont'd pg. 6

U.S.A.

WORLD HERITAGE TENTATIVE LIST

Bode Morin, TICCIH US National Representative

The United States Department of the Interior, through the National Park Service (NPS), has released the revised US World Heritage tentative list, following a year of consultations with ICOMOS and topical experts. The tentative list identifies natural and cultural sites deemed eligible for UNESCO world heritage but still need a formal application and nomination process.

While earlier studies including the US ICOMOS Gap report and internal and external consultations indicated a strong need to increase the number of industrial and technology sites on the tentative list, the committee faced some challenges fulfilling that charge and only put forth the Brooklyn Bridge and Chicago Skyscrapers, both considered for their significant technological advancements.

Two important conditions for nominating cultural sites are the need to demonstrate outstanding universal value (OUV) on a global scale and be largely complete, intact, and protected heritage sites. Most industrial sites that are significant enough to meet the OUV criteria have existed for long periods of time and experienced great change in their operations and functions, unlike sites represented through architecture that can stay much more intact over time. Other industrial sites may be well preserved and protected but may not represent enough OUV for consideration.

The NPS committee considered several other well-protected industrial sites including the Detroit Piquette Plant where Henry Ford invented and built the first 12,000 Model Ts, the EB1 Breeder Reactor in Idaho, the first nuclear reactor built for peace-time functions, and Cornwall Iron Furnaces, a well-preserved, protected, and significant charcoal iron site in Pennsylvania. The NPS commissioned a preliminary study from ICOMOS to look at the proposed tentative list. The report, which strongly influenced the final list, concluded that the Piquette Plant lacked enough original equipment related to the period of significance and Cornwall, which maintains a relatively complete industrial complex, also did not have enough original equipment from the period of greatest significance. The report suggested that both sites in their current configurations would need to expand their boundaries and include additional Ford sites in Detroit and company towns in Cornwall to enhance their eligibility. The EB1 reactor was given a positive review, but the site owner, the US Department of Energy, was not willing to list the site.

The tentative list process highlighted the challenges of identifying American industrial sites that meet the requirements of OUV and maintain enough original protected fabric for consideration.

Ford Motor Company Piquette Avenue Plant, Detroit, is not considered significant for its structure, an unremarkable nineteenth century mill design selected primarily for open space hand-manufacturing. The tools and equipment it contained were equally unremarkable, designed for nearly any type of industrial production. Photo: Detroit Historic Building Archive

The significance of Henry Ford's Piquette Plant, for instance, lies less in the building than in what happened inside it, in the ideas that were generated that led to the creation of a low-cost automobile and ultimately to its mass-production at the Highland Park plant. Unfortunately it is difficult to fit this significance into one of the 10 criteria required of World Heritage and past practice. While the expansion of the potential nomination has merit, both the Ford Highland Park plant and the Rouge Complex which have high OUV, have problems with authenticity and completeness.

The proposed tentative list was published in the Federal Register, a US journal to distribute government notices and proposed rule/law changes, public meetings, etc… on December 9th. The notice allowed a 15 day comment period. Once comments are received and considered, the list will be finalized, likely some time in winter 2017. The sites that make the final list will then be encouraged to begin the formal World Heritage application process which could take several years. However, only one site from each country may be nominated each year. Sites that vied for a spot on the tentative list but did not make it, may attempt to incorporate some of the suggestions from the ICOMOS preliminary study and reapply for the revised list in 2026. The Piquette Plant will continue preservation and development at the site as if they were listed and will work to strengthen their position for future consideration.

Hydraulic electric power station on the Lech canal from 1906.

GERMANY

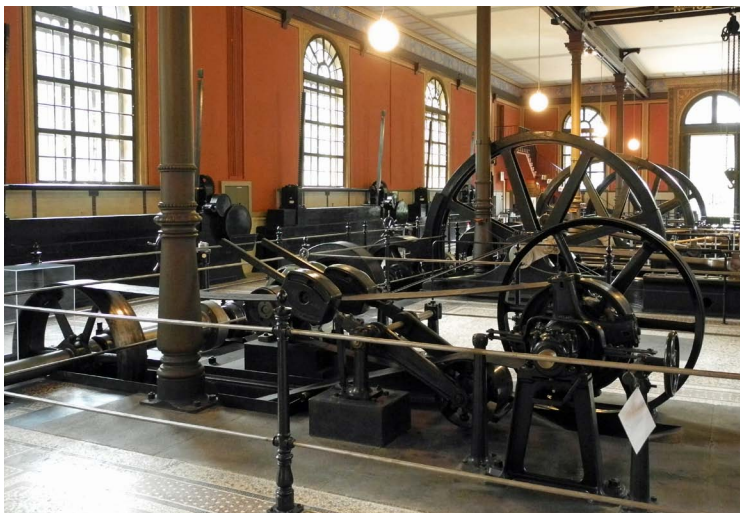
THE WATER SYSTEMS OF AUGSBURG, WORLD HERITAGE?

Rolf Höhmann

The Bavarian city of Augsburg houses a large number of heritage sites that are a testimony to an innovative and progressive water supply system. The continuous and steady development of its features are precisely documented from 1416 until today and therefore reflects a long tradition of interchange of human values.

For many years the Augsburg water economy system was determined and promoted by the natural richness of its water. Besides the rivers Lech and Wertach, which originate in the northern Alps, the geological situation is very favourable. A large gravel area under today's city forest acts as a filter and reservoir for pure water. In principle, two phases can be distinguished: the water management of modern times, between the 13th and 19th centuries, and the adapted system during industrialisation. In the earlier development, pure drinking water and service water became separated, but the watercourses still ran on the surface, sometimes side by side, and so were endangered by pollution. The key building of this era was the Rotes Tor (Red Gate) which housed the technical installations to pump and distribute the different water qualities into the city centre for their specific use, including three remarkable fountains.

Several cholera epidemics in other cities during the 19th century and the resulting research into hygiene led to a new evaluation of the Augsburg water supply. The surface drinking water channels from the Stadtwald were replaced by pure water pumped from deep wells. The key building of this era was the drinking water works at the Neubach, inaugurated in 1879. It replaced older water towers in the town and could supply all the inhabitants with drinkable water. The existing water courses outside of the historic city walls were widened to supply the growing water demand of the ongoing industrialisation. The development of the industry followed the course of the water from Lech and Wertach rivers. In the first stage, waterpower was used for direct mechanical drives using waterwheels and turbines, which were later followed by hydraulic electrical power generation.



Fresh water pumps in the 1879 Hochablass waterworks, built by Maschinenfabrik Augsburg, predecessor of todays Maschinfabrik Augsburg-Nürnberg MAN.

Many of these power stations still survive and give testimony of the sustainable water management of the town, while the industry was moved or closed down. Connected to this development are measures to bring back a more natural outline to the much rebuilt Lech and Wertach rivers. A unique feature of the specific Augsburg way and the resulting future-oriented handling of its water resources is their extraction near the town in its own Stadtwald forest. Adequate regulations developed over centuries for the protection of the drinking water supply area secured this for the future.

In a nationwide survey of German World Heritage Tentative List nominations in 2014, an advisory board evaluated 31 proposals and choose seven which should continue for nomination. The Augsburg proposal was in third place for nomination to UNESCO in 2018. Since 2015 work on the dossier started by independent consultants commissioned by the City of Augsburg.

One of the problems of this nomination lies in the International Comparative Analysis (for example, see TICCIH's **current list of thematic reports**). There are several World Heritage Sites listed with water and drinking water themes, but not linked to modern times and continuous use and development for the last 600 years. The one exception is the Padre Tembleque Hydraulic System and its outstanding aqueduct in Mexico (**TICCIH Bulletin #73**). While this is set in a predominantly rural area, Augsburg focuses on the drinking water supply of a large town and the dynamic modification of its water supply for industrialisation purposes. So far there is no thematic study by ICOMOS or UNESCO in the field of drinking water supply except for the Middle East and Maghreb, although this is one of the most important questions in history and the future of mankind.

Augsburg's water systems were designed in the city itself, using methods already known or developed further by its own engineers and craftsmen. Their work became very well known all over Europe, with frequent visits from other towns and countries. Authentic archive materials and working demonstration models are still extant, some dating from the 17th century. The modern drinking water pumping station from 1879 and its technical equipment with turbines, pumps and pressure accumulators was planned and built in the town from companies, which later became very well known, like MAN (Machine factory Augsburg-Nuernberg). The combination of water turbines used for pumping drinking water seems to be quite unusual, with only one later example known in Germany. A survey of comparable pumping stations worldwide using these combined techniques seems very difficult. The **author** would be grateful for valuable information on this specific topic from other TICCIH members.

STEEL GIANTS, CONTINUED

Hunedoara Steelworks closed during 1999-2010 without any possible debate regarding its potential heritage value. It disappeared faster than the bibliographical research concerning its construction and destiny, and even faster than the definition of any possible strategy enabling its conservation. In Hunedoara, there still are tangible traces of its industrial past dispersed over a wide area, from which only two buildings are protected as historical monuments: the administrative pavilion (1906) and the apprentice school (1937). Moreover, the disappearance of the main production plants of the steelworks is commonly associated with the disappearance of the industrial heritage in Hunedoara.

In the overall Romanian setting, Reșița (1771 -), Hunedoara (1884 – 1999) and Galați (1960 -) define together the steel industrial history from its early development of the late-18th century to the most recent past. It cannot be stated which is more significant from a patrimonial perspective, as each had different development trajectories with specific territorial, social and cultural settings. They are all important for the territories and communities that shaped them. Having Hunedoara Steelworks as a reference point, my research is directed towards a possible safeguarding and conserving strategy for the integrated steel plant in the Romanian context. Discussion concerning the heritage acknowledgement of this typology of industrial legacy in the Romanian setting is still young, and, unfortunately, it appears to be one of the most vulnerable of the built environment.

The Hammerdalen mill was used for processing raw wood into wood pulp, cellulose, cardboard or fibreboard. It was constructed in 1875 and extended in 1905 and 1975, and finally closed down in 2000. It was totally renovated and adapted for the Larvik Cultural School and the dance studio Nille in 2007/2008. Photo: Fritzøe Eiendom AS

NORWAY

INDUSTRIAL BUILDINGS AS CULTURAL SECTOR INJECTIONS

Grete Swensen, senior researcher, and Sveinung K. Berg, researcher, Norwegian Institute for Culture Heritage Research

Major restructuring has taken place in late-modern society as a result of the massive close-down of heavy industries. Many of these post-industrial sites have become integrated into the larger urban fabric and are centrally located in cities. Urban densification and the demand for development and building sites increase the attractiveness of these areas among private developers. Architects and planners find the special qualities of such sites an opportunity to combine cultural heritage and innovative architecture in creating attractive city spaces (see below). The cultural/creative sector, in particular, has welcomed these sites as inspiring environments for creative activity.

The transformation of the former industrial sites at Hammerdalen in Larvik and Papirbredden in Drammen are examples of this process. In Hammerdalen, parts of the present buildings have been in use since the 17th century as a forge and saw mills. Other parts are more recent remnants from industry and workshops from the 19th and 20th century, such as the silo in Papirbredden. Culture in combination with several other functions has played a central role, both as a motivation for starting up and as a basis for developing a commercial opportunity. During the transformation, various degrees of 'parkification' have taken place by partly renovation and partly adding new structures to the sites. In Hammerdalen this process has been governed strongly with a demand to prevent as much 'parkification' as possible.
The overarching plans for both projects have been to add new functions and to incorporate new elements side by side with the old

structures. This process has demanded constant decisions: which changes can be considered in accordance with the tolerance level and which are too extensive to accept. Cooperation has taken place between a series of institutions at various levels which contributed to a planning strategy stamped by negotiation. Similarities in the two cases are that both result from partnership between private and public sectors, and culture in combination with other factors has been held an important motivator. But there are also differences related to timing, the length of the planning process and the building period, and the degree of engagement early in the planning from local user groups and activists.

Adding to this study, a coarse-meshed survey in several Norwegian municipalities identifying the re-use of former industrial buildings shows that around half those in the survey are used as various forms of cultural arenas, while less than a third are for purposes which combine culture and business.
Population density, historic development and economic adaptation vary between the municipalities, but the point to stress is the variety in the forms of adaptation that the survey identified. While some have grown out of initiatives from artists, others are based on cooperation between private entrepreneurs and municipal planners.

There are convincing arguments in the planning discourse concerning rehabilitation of redundant industrial buildings, concerning both environmental consideration and sustainability. The two studies referred above illustrate that the reuse of redundant industrial buildings has become a common strategy in Norwegian cities and towns. Several functions can fill these buildings that are regarded as useful in the contemporary city. They are robust and susceptible to change and can be adapted to different levels of restoration, can be used to bring new life to dilapidating areas and their original rough character and 'unfinished surfaces' are attractive.

The two projects referred to share a common framework. Overarching political guidelines at national level can be traced back to government White Papers concerning cultural policy, urban transformation and cultural heritage, and the cultural policies in Norwegian municipalities mirror these guidelines. The ability to work across sectorial divisions in the municipalities seems to be the decisive factor in the success of this type of rehabilitation initiatives, rather than economy. The motivations that govern different actors that are involved will vary. While artists might find old industrial buildings cheap to rent as studios, entrepreneurs might see a potential for development which makes it worth investment. New interest groups and partners have been brought together through renewal of industrial heritage as a vital contribution to urban regeneration and development and will continue to challenge the future for industrial heritage as a possible resource.

Urban regeneration is closely connected to the emphasis which has been put on culture and creative industries as drivers for development, which has shaped a considerable part of the new development projects in Norwegian towns and cities. Some of the buildings that are used to house culture are 'landmark buildings' designed by recognized architects and have become prestigious projects used to promote the city profile. The potential of using redundant industrial buildings for cultural purposes has also become a niche for inclusion of heterogeneous possibilities that are in quest in contemporary cities.

TICCIH
President: Professor Patrick Martin, Professor of Archaeology
Michigan Technological University, Houghton, MI 49931, USA
e: pemartin@mtu.edu, t: +1 906-487-2070

Secretary: Dr. Stephen Hughes
e: secretary@ticcih.org, t: +44 1970 621215

Editor: Articles and news of recent and future events should be sent to the Editor, James Douet, C. Bruc, 176, 2. 4., Barcelona 08037, Spain, e: editor@ticcih.org

Bulletin layout: Daniel Schneider, e: ticcih@mtu.edu
TICCIH Membership: Daniel Schneider, e: ticcih@mtu.edu
TICCIH Website: Daniel Schneider, e: ticcih@mtu.edu

TICCIH is the world organization for industrial archaeology promoting conservation, research, recording and education in all aspects of industrial heritage. It holds a triennial conference and organises interim conferences on particular themes. Individual membership is $30 (USD), corporate membership $65, and student membership. $15

There is an online membership form on www.ticcih.org

The **TICCIH Bulletin** welcomes news, comment and (shortish) articles from anyone who has something they want to say related to our field. The Bulletin is the only international newsletter dedicated to industrial archaeology and the conservation of the heritage of industrialisation. The TICCIH Bulletin is published online to members four times a year.

Back issues can be downloaded as a pdf file from the TICCIH web site, www.ticcih.org.

ISSN: 1605-6647

Tabačka Kulturfabrikin, a characteristic art factory in Kosice, Slovakia. From the 1970s, numerous cultural institutions have appeared in spaces left behind by deindustrialisation. Trans Europe Halle is a European network of 'non-governmental cultural centres initiated by citizens and artists' claiming 90 members.

INTERNATIONAL

THE ART FACTORY

James Douet

Ever since Andy Warhol named his New York studio 'The Factory' there has been a strong association between avant-garde art and old industrial spaces. Artists and performers are often the first to occupy abandoned industrial sites. Low rent (Warhol was paying $100 a year in 1962 for his Midtown Manhattan loft), open floors, natural light, as well as evocative grime and 'edgy' neighborhoods, all appeal to young, adventurous creative types. As the Norwegian example above shows, the art factory is today recognised as an important sub-set of adaptive re-use and a popular instrument to regenerate decayed industrial districts.

Initial occupation of vacant sites may be spontaneous, dangerous and illegal or planned, managed and marketed. But in countless cases it is the first step in a transformation process which can bring site and vicinity back into 'beneficial use' and on a rising curve of prosperity.

French scholars call these *espaces en friche* - 'fallow' spaces, suggesting a lull, waiting for new growth to start. Indeed, the metaphor of the ecological plant succession is an apt one: fallow or polluted land is first colonised by 'pioneer' species which enrich the barren substrate, allowing other plant ecologies to move in. These in turn replace the earlier colonizers until a stable assemblage, known as the 'climax community', is reached.

Once occupied by young artists or performers, vacant industrial sites become safer, are no longer viewed as blighted, and start to undergo a revaluation as commercial activities adhere to the artistic projects – shows and exhibitions, bars and clubs, makers and designers.

Rents and land values increase and the pioneers are gradually displaced by commercial tenants, galleries or fashion outlets. Visitors

The recent prize-winning conversion of industrial buildings in south London, a former theatre carpentry and scenery painting workshops, into Damien Hirst's Newport Street Gallery. This example has skipped the 'poor artist' phase of the art factory succession.

stimulate the leisure economy and creative tourists pick up on the new locations. This process may continue until a form of 'climax community' is reached, with the permanent occupation of the old spaces by wealthier residents, conversion to mainstream arts spaces or as offices.

In cases like Toronto's **Artscape** or Warehouse 1305 in Shanghai, the art factory process can achieve the sustainable re-use of a building, at minimal public expense, and exert a catalytic 'place-making' effect on the local area, changing negative perceptions and reversing decline.

For local communities, the early phase is generally positive, bringing greater security and social and economic renewal. The later stages, however, often result in them being squeezed out through gentrification, as land values and rents go beyond their reach.

The classic case of the urban succession process is indeed Manhattan. Jane Jacobs' *The Death and Life of Great American Cities* celebrated the old garment and warehouse districts in 1961, when these industries were moving out and the area was blighted by Robert Moses' plan to run the Lower Manhattan Expressway through the middle.

In this 'fallow' moment, artists began to move in, often illegally occupying buildings which were still zoned for industrial use. After trying to expel them, the city administration responded positively and from 1971 created a special zoning category, 'Live-Work Quarters for Artists'. By the 1980s, perceptions had changed, rents were going up and galleries, smart clothes shops and restaurants were moving in. A savvy real estate agent renamed Lower East Side the 'East Village' and its future was sealed.

But as **Sharon Zukin** describes it, neither the end of Moses' 'slum clearance' road projects, nor the artists' zoning protection, nor the historic building designation that Jacobs fought for, saved the community which inspired her book. Urban sociologists like Zukin or David Harvey are sceptical of art factories because they see them as contributing to a rise in property values which has financial benefits for some, but not usually for the original inhabitants.

Without government rent controls or legal protection, natural succession/gentrification may help neither long-established communities nor historic buildings. Shanghai's Warehouse 1131 was a 1921 industrial site, used as a hotel, and after 1949 the Second Rice Factory. It became one of the most popular of the early arts factories in the city but was a victim of its success. Commercial and political interests overcame local opinion and historic value and it was demolished in 2002.

FRANCE, U.K.

RE-USING INDUSTRIAL BUILDINGS IN FRANCE AND ENGLAND

Aurore Caignet

When recycling industrial buildings, it is not unusual to see conflicts between the conservation and valorisation of the industrial heritage and the cultural re-use, especially when this requires architectural interventions and encourages the association of new buildings with historic architecture. Architects and developers are often asked to consider the significance of historic buildings and to retain key elements from their original function so that future generations can read the material traces of their industrial past. Moreover, the role of industrial archaeologists and preservation trusts can consist in underlining the historical, architectural, cultural values of industrial buildings and in providing information and advice before any irreversible or detrimental action might be carried out. A dilemma often appears between a willingness to maintain the authenticity and intrinsic value of buildings through minimal intervention, and a desire to promote a new, distinctive image, as well as professional acclaim, by adding innovative architectural elements.

Such clashes were apparent in 1994 when Manchester's only remaining hydraulic pumping station was turned into the National Museum of Labour History, now known as the **People's History Museum**, and when plans to redevelop and expand the pump house emerged in 2007. This building supplied hydraulic power from 1909 until 1972. At the time of its conversion into a museum twenty years later, it was decided not to give prominence to its former industrial function. More attention was therefore paid to the conservation of the attractive architectural shell.

Another type of re-use approach was adopted for the conversion of the LU biscuit factory in Nantes, France, into a cultural venue for contemporary arts. An industrial identity is still highly visible. The factory was built at the end of the 19th century and partly demolished in the mid-1970s before being resurrected in 2000 as the **Lieu Unique** - a new name from the old initials meant to recall the former industrial activity. Architectural interventions were intentionally modest, and major industrial features such as cast-iron columns and the glazed roofing were kept and enhanced. Whenever alterations were made to redesign the internal space, industrial elements and raw materials were used not only to reinforce the industrial character of the building, but also to give it an unfinished look.

Yet, because the unfinished industrial look of the converted LU factory is deliberately emphasised, it would have been more judicious to favour a strategy of controlled ruination over a faithful restoration bordering on falsification. Although the dome is in harmony with the rest of the tower, this replacement is so undetectable that only an expert would be able to read it as a copy of the original.

In the People's History Museum, Manchester (top), the contrast between old and new is clear, a visual confrontation which hints at dynamism and creativity as opposed to frozen time and architectural inertia. The tower of the LU biscuit factory, Nantes (above), was faithfully restored, its decapitated dome rebuilt to how it would have originally looked. Photo: Creative Commons

Instead of building a near-perfect replica of the dome, it would have probably been more interesting - from a historical and architectural perspective - to retain the derelict tower of the biscuit factory as an atypical symbol of regeneration, as well as a reminder of a once-neglected heritage. Another option could have consisted in the creation of a resolutely contemporary dome. Indeed, new architectural additions can produce remarkable temporal juxtapositions, providing a contrast which is compatible with a balanced articulation between conservation and architectural production. Not only does re-cycling industrial heritage help to guarantee their durability within a sustainable development approach, but the creative relationship between adaptive re-use and contemporary architectural redevelopment also induces a dynamic visual dialogue – a dynamism and honesty which are somehow missing from the converted French biscuit factory.

SWEDEN

RESTORATION AND PRESERVATION OF STEEL STRUCTURES

Patrik Reuterswärd

*Following the articles on metal corrosion in the last issue (#74) and subsequent correspondence, paint consultant **Patrik Reuterswärd** reports on successful treatment for steel structures in Sweden.*

For the preservation of our cultural and historical heritage, the maintenance of steel structures is important as well as challenging. Without a proper maintenance of historical objects, the steel and iron structures will slowly deteriorate with corrosion. Small metallic objects can be protected and displayed at museums in climate controlled stands. Large objects in outdoor conditions need to be protected from corrosion by maintenance. This should be done by appropriate methods and without destroying historical values. The most common situation is unfortunately that the budget for preservation is insufficient. Therefore, the maintenance cost must be minimized. This article describes how this is performed in Sweden.

The entrance to the Queen Christina shaft of the Sala silver mine (left). Sheet metal roofing has been conserved at the mine buildings.

APPROPRIATE METHODS

The first rule of handling objects with a certain heritage is to neither add nor change anything of the historical material, but in the case of corrosion this is not a possible option. Sometimes the aim may include restoration of the object to its original condition by removing newer added materials. In this case, the removal of modern coating material will be considered. Often, modern coatings are unable to give historical objects a good and lasting protection against corrosion and therefore threaten the long-term preservation. In these cases, removal of unsuitable coatings is recommended.

PROTECTIVE COATINGS IN THE PAST

Different types of linseed oil based paints have previously been very successful, as with the examples below from old transmission towers in Sweden. Many were made in Sweden between 1930-1940 and are still a vital part of the infrastructure. The first photo shows a tower where the coating eventually started to flake off the mill scale surface though the amount of rust is still negligible despite the paint flaking. The second shows a small area without any maintenance after 70 years. The third shows a painted weld with weld splatter made in 1935 with no visible rust. The original paint was painted over once in the '70s. Even compared with more modern coatings, the lifetime of these old original paintings is very impressive! By investigating old painted surfaces it was discovered that this type of very durable paints was extensively used during the '30s as an industrial standard for corrosion protection.

A 70-year-old coating starts flaking off

A small area with only the original painting in good condition

A weld seam from 1935 without any rust

APPROPRIATE AND COST-EFFICIENT MAINTENANCE

In Sweden, we are using gentle and non-destructive pre-treatment methods such as water jetting, carbon dioxide ice blasting or manual scraping tools together with a steel brush. After removing loose rust and loose old paint, a unique rust penetrating primer is used to seal the remaining rust and old paint. The primer is then painted over with same type of paint commonly used during the '30s. This has been practised for more than thirty years and is the approved method for treating riveted steel bridges by the Swedish Road Administration (Trafikverket). Several riveted steel bridges have been maintained since 1989. Up until now, this method has proved very effective. After 25 years, only minor touch-up of the paint is needed.

In particular, the method of pre-treating with water-blasting up to 800 bar pressure is recommended since it has a lot of advantages. Only loose rust and old brittle paint are effected and the steel or iron surface is left unaffected, while all pre-treatment is made in one fast operation.

The overall combination of water-blasting and the rust penetrating primer makes it possible to make durable corrosion protection without sand blasting of the steel. The special action of the primer is to penetrate and move through the rust. It is very suitable for riveted constructions since the primer is able to permeate the pores and crevices. The savings are considerable and makes it possible to, with a limited budget, preserve our steel heritage for the future.

U.S.A.

PULLMAN INDUSTRIAL HERITAGE INITIATIVE

Tim Scarlett, Michigan Technological University

Michigan Technological University's Industrial Heritage and Archaeology faculty are pleased to announce the Pullman Industrial Heritage Initiative, a new three-year collaborative partnership with the United States' National Park Service. During the initiative, a team of faculty and students in IH&A research group will provide support to the staff of Pullman National Monument in Chicago, Illinois; undertake new research in industrial archaeology and heritage; establish joint research with allied scholars at other universities; and implement models for best practice in community-led, 'citizen historian' and design-based heritage programs.

President Barack Obama created **Pullman National Monument** on February 19, 2015, through Proclamation 9233. Pullman was the first large-scale industrial planned community in the United States, a model factory town built during the 1880s according to the vision of industrialist George Mortimer Pullman. The project centered on the Pullman Palace Car Company's need for a new factory facility to build their rail cars for high-end travelers. Mr. Pullman sought to apply European models of good housing and a healthy and hygienic infrastructure that included parks, in-house water and sewer systems, and greenspace and trees illuminated by street lights in the evening. He hoped the improved landscape would ameliorate the social ills of 19th century urban industrial capitalism, including slums, crime, and labor unrest, all of which were key problems facing Chicago in the second half of the 19th century. The factory and town quickly became tourist attractions, which grew when visitors to the World's Columbian Exposition began visiting the site in 1893.

The Pullman Industrial Heritage Initiative provides an exemplary opportunity to study the social organization of work and the struggles individuals faced at the intersections of paternalism, capitalism, and industrialization. George Pullman maintained direct control of almost all aspects of life in the community and factories, and the Pullman story has become a case study in American corporate paternalism and business management. The company's workers twice engaged in labor actions of major significance to American history. As the United States entered a financial panic and depression in 1893, Pullman's factory workers organized and pushed the American Railway Union into a major strike action that grew into a national boycott. 150,000 railroad employees refused to move any trains that included Pullman Palace Cars and disrupted rail traffic throughout the country, particularly in the American west. The United States government, on presidential order, deployed thousands of Marshalls and Army troops to the town. In the ensuing violence, dozens of people were killed and many more were wounded. While the strike was broken, public sentiment also turned against George Pullman and his company for their refusal to arbitrate the dispute.

Pullman also offers a powerful opportunity for developing community-engaged heritage practices around African-American labor history and civil rights. Shortly after the ARU/Pullman strike, the Pullman company again became the focus of labor dispute in the United States. Just after the American Civil War, George Pullman had started hiring formerly enslaved African American men to work as porters in his palace cars. These men worked for decades for the company, enjoying the cash wages and geographic mobility denied to many blacks. George Pullman became one of the country's largest employers of black workers. During those years the men were excluded from the protections won by the growing railroad trade unions formed by

PULLMAN, Cont'd pg. 17

INDUSTRIAL MUSEUMS

U.S.A.

NATIONAL MUSEUM OF INDUSTRIAL HISTORY OPENS

Bode Morin

This past August, the **National Museum of Industrial History** opened in Bethlehem, Pennsylvania. The museum, in the planning and development stage for over 17 years, faced legal, public, and political scrutiny for its long-delayed opening. Part of the redevelopment of the sprawling Bethlehem Steel plant, the museum is situated in the former electrical shops and joins the preserved bank of blast furnaces, a performing arts space, TV studio, and casino. Currently only the first floor of what will be a two-story site is open with no published time frame for the second floor. For now, the museum is displaying machine tools and steam engines from the 1876 Centennial Exposition held in Philadelphia celebrating the first 100 years of the United States. The remainder of the gallery space is dedicated to Bethlehem Steel with smaller exhibits on silk production, propane, and the worker experience.

SLOVAKIA

HERITAGE IN THE EYES OF EXPERIENCE/EXPERTISE

Nina Bartošová

Industrial heritage is not only gaining in fashion among the wider public, primarily thanks to the visual attractiveness of historical industrial architecture, yet at the same time provokes many questions. In Slovakia it has been for the past decade a sought-after task among architects, architectural historians and theorists, or preservation experts. The highly exposed visual setting that we find in Bratislava may well increase the complexity in the position of industrial landmarks, yet it equally provides adequate space for attempting to view the matter in a variety of differing perspectives. As much as 'inter-disciplinarity' is regularly invoked, it is in practice still rarely encountered, or respectively, industrial heritage is limited primarily to questions of technology, history and aesthetics, while an ethnological or sociological standpoint tends to be conspicuous only in its absence.

The project 'Industrial Heritage in the Eyes of Experts/Experience' at the Slovak Technical Museum - Museum of Transport Bratislava aims to support a plurality of views on industrial heritage. The project was initiated by the architect Nina Bartošová from the Institute of History and Theory of Architecture and Monument Restoration, Faculty of Architecture of the Slovak University of Technology in Bratislava, with cooperation of the historian of architecture Katarína Haberlandová from the Institute of Construction and Architecture of the Slovak Academy of Sciences in Bratislava. We are the curators of the exhibition.

The title has become a metaphor that places emphasis on the general need to accept the existence of diverging, and in some situations contradictory, views of the theme of industrial heritage. 'Expertise' and 'experience' reveal the contrast between the professional/imper-

Industrial hall of the former Matador factory designed by the German architect Heinrich Zieger, built in 1912, on the front page of the Der Industriebau from March 15, 1919 (Source: Research Centre for Industrial Heritage FA CTU Prague). On the right, the interior of the building today (Photo: Silvia Slaničková).

sonal and the subjective/personal, expressing the wider, predominantly social and anthropological, essence of the importance of cultural heritage. The exhibition is intended for the general public, addressing a number of still-extant factories – even if only in a fragmentary state – that are directly threatened with destruction, demolition or extensive rebuilding: Cvernovka, Dynamitka, and Matador.

The ambition of the exhibition together with the publication 'Industrial Heritage in the Eyes of Expertise/Experience. Theory and methodology of industrial heritage preservation in the context of Bratislava' that is coming out at the end of the year 2016, is to spur interest among other subjects that could contribute not only to successor projects in the series of planned exhibitions (publications) within the wider framework, but also to assist in a wider social change.

TICCIH

BOARD MEETINGS, 2016

Stephen Hughes, TICCIH Secretary

The TICCIH Board usually has at least two meetings a year, chaired by the President, Professor Patrick Martin. In 2016 both meetings were held online and took place on 13 May and 5 November, attended by Board Members from ten countries across four continents. The May meeting was the first opportunity for the new Board to meet and to learn about each other's work.

At both meetings the TICCIH Treasurer, David Worth, produced detailed reports explaining the very healthy state of TICCIH's finances. Switching the production of the TICCIH Bulletin from a paper production to a purely digital format resulted both in a considerable cost saving and a considerably improved product under the direction of the Editor, James Douet.

One idea discussed was financing the production of a new TICCIH book, dealing with the regeneration and re-use of old industrial buildings whilst retaining the core characteristics that illustrated their functional importance. A second discussion was how to re-start the series of industrial archaeological World Heritage Studies that had facilitated the recent inscription of so many industrial and functional world heritage sites and landscapes on the World Heritage List.

A major part of both meetings was taken up with the opportunity to build on the **TICCIH-ICOMOS Memorandum of Understanding** (MOU) which had been approved at the Florence General Assembly in 2014. The ICOMOS Vice President Grellan Rourke subsequently started discussions for a proposal for a joint two-year Action Plan for implementing the MOU. The TICCIH President, Patrick Martin, and Secretary, Stephen Hughes, co-operated with Grellan in producing a draft two-year action plan which closely mirrored the structure of the MO. Attached to the action plan was an annex for a renewed programme of World Heritage Studies which was circulated to the TICCIH Board.

It was agreed at the May Board Meeting that the President should write to all TICCIH national Representatives and Committees to engage with their ICOMOS National Committees to explore joint working and this was subsequently done.

A working group of the President, Secretary and Board Member Irina Iamandescu, who is Secretary of ICOMOS Romania, was instigated at the May meeting in order to co-ordinate with the ICOMOS Initiative examining the effectiveness of its own arrangements on the Industrial Heritage. Irina was designated to lead on discussions with ICOMOS concerning the refinement of the TICCIH-ICOMOS Action Plan. The Secretary was also asked to speak at a joint meeting of TICCIH & ICOMOS Slovenia which turned into a productive debate of issues regarding the specifics of future co-operation.

At the end of October Irina represented TICCIH at the ICOMOS General Assembly in Istanbul and a working party was formed to further examine the arrangements for dealing with the Industrial Heritage within ICOMOS. The ICOMOS Board and Advisory Committee largely approved the joint TICCIH-ICOMOS action plan with a few details to be finalised by March 2017.

The TICCIH President has taken the lead on the digitisation of the TICCIH Congress Proceedings (see Patrick Martin's Opinion article above), produced for successive **TICCIH General Assemblies**, which represent a considerable contribution to researching the industrial heritage. These will be searchable electronically and placed on the TICCIH website.

At the November Board Meeting there was a considerable discussion of the need to reform the TICCIH dues structure to make it fairer to members from poorer countries. The rationale of the national structures of member countries needs to be made consistent as does the form of individual membership. A sub-committee was formed to examine how other international organisations organise their national memberships and dues and is to report back to the TICCIH Board with recommendations. It is not proposed to introduce any changes to the dues structure in 2017 which has already been publicised in the Bulletin.

On-line Board Meetings are an effective way of carrying forward the work of TICCIH but face to face meetings are also valuable for a more detailed discussion of some issues and for wider liaison. It is proposed that there should be a Board Meeting during the **ICOMOS General Assembly** in Delhi, India, in December.

Renew your TICCIH membership for 2017 at

www.ticcih.org

GERMANY

20 YEARS OF INDUSTRIEKULTUR

Norbert Tempel

The German quarterly magazine ***Industriekultur*** covers the industrial heritage scene in Germany and in Europe and sometimes beyond, as well. In 1995 a group of interested people made the first steps to publish the new magazine, dedicated to monument care and landscape as well as social movements and the history of technology and the environment.

The main emphasis was on industrial heritage sites and especially on those whose existence was in danger. At that time, the International Building Exhibition took place in the Ruhr area and it stimulated not only people in the administration, academics in urban planning and professionals in the museum sector, but also generated a broad public interest in the reconversion of an old industrial basin. The initiators developed the idea of a magazine covering the whole field of industrial culture - a term which has become more and more popular as a synonym for new, creative usages of old industrial structures.

Since then the Museums of Industry in Rhineland and Westphalia have introduced the board of editors. Over 20 years, 70 issues have appeared with more than 3.500 pages. Every issue has been devoted to a special topic – bridges, collieries, textile mills, iron and steel industry, coke and gas, rubbish and scrap, waterways and shipping, railway structures, steam power, aircraft and automobile industries, industrial world heritage, girls at work, timber, oil production or hydropower stations. Another section of the issues is devoted to short contributions, regional news, book reviews, and conference announcements. Historic advertisements are used and industrial artists, photographers, writers or artists like H A Schult and his "Trash People" sculptures are presented.

Around 2,500 copies are printed of each issue have been distributed in Germany, Europe and around the world. For example, all members of the Associations for the History of Technology and Industrial Culture in Switzerland and Germany (Schweizerische Gesellschaft für Technikgeschichte und Industriekultur SGTI; and the Georg Agricola Gesellschaft - GAG) recieve Industriekultur by subscription.

Every year a special issue is dedicated to the industrial heritage of one country, most articles being written by residents – mainly friends from the TICCIH community. A special issue about France came in 2001, organized by Axel Föhl with Jean-Francois Belhoste and Paul Smith. A Northern France issue, supported by our French TICCIH colleagues Geneviève Dufresne and Marie Patou, appeared for the 2015 TICCIH Lille conference. Scotland in 2014 was written with

A sample page spread from the 2016-2 issue.

Miles Oglethorpe and Mark Watson. The "jubilee" edition No. 75 (issue 2.2016) dealt with industrial cultural landscapes with international contributions from the TICCIH community.

The first 70 issues are available as an electronic archive on DVD, since last year the print edition is accompanied by an electronic version. The DVD is ready for full-text search, an index register is available online. Breaking news and events are published online on **www.industrie-kultur.de**.

The magazine is published in cooperation with the German TICCIH section, the German ICOMOS working group on technical and industrial monuments, the European Route of Industrial Heritage (ERIH) and other societies in the field of the history of industry, transport and technology. In every issue ERIH, a touristic network, provides four pages of information about connected sites and routes.

THE MAKING OF INDUSTRIEKULTUR

The intention is to cover a broad thematic range in every issue. Authors have to come to terms with a restricted magazine-like format of some four pages. We provide links and hints for further reading, addresses and contact to authors to facilitate direct contact.

To meet the demands of such a vast variety of readers, experts and amateurs, our guideline is to write intelligibly to all but at the same time being coherent in terms of technology, engineering and architecture. Only intensive editing ensures the high level of correct information and easy readability - not to mention the challenge of translation work.

In quarterly meetings, the editorial board discusses new topics and approaches, potential authors and sources for excellent images. Most work – apart from the final editing, layout and printing – is done voluntarily. Industrial archaeologists, monument officers, museum ex-

perts, academic people, conservators, architects, engineers, journalists, photographers and artists are readers of the magazine as well as contributors. To put it in numbers there have been around 750 different contributors over the past 20 years.

We do not intend to publish another academic journal but to involve a broader readership and a wide range of contributions. We try to bridge the gap between academics, monument officers and experts in museums on the one hand and industrial archaeology practitioners, amateur historians, industrial tourists and discoverers (spelunker) on the other. Therefore the editorial staff is working on eye level with amateurs. Often volunteer contributors are highly motivated, have deep insights into many areas of expertise, they travel and take pictures nearly everywhere, have knowledge of foreign languages, are active in different communities … and they want to share their abilities and findings with editors who appreciate their contributions.

And the editors have to be enthusiasts as well, sharing their insights with amateurs and writing their contributions in their spare time. Every so often we arrange excursions where all contributors are invited to participate. Through such events and other frequent meetings where people can join in the discussion of projects a true common spirit is created. Through this personal exchange of ideas a true "joint venture" evolves.

As far as we know there are no publications of this kind in our field. Our publication has an independent editorial board and is not a periodical of any particular association, institution, foundation or committee. The articles in it do not focus just on one country, although it must be said that the main emphasis is on European developments.

HOW TO CONNECT WITH VOLUNTEERS?

One of our cooperation partners, the Georg Agricola Gesellschaft, the only German society acting nationwide in the field of industrial culture, has developed the idea of a yearly award dedicated to local and regional initiatives working to raise public awareness in the preservation and interpretation of industrial monuments. This year the award has been presented for the first time, and the winners and their work will be in *Industriekultur*. This is our contribution to building up a network as an exchange platform.

Excursion of the editorial board and friends to see the Cologne Rheinau-Harbor re-use projects, in 2008.

We would like to take this opportunity to thank all the contributors from the TICCIH community. Also we would be very grateful to receive any contributions or suggestions from any of our readers, especially in preparing a South America issue for 2018, in time for the next TICCIH congress.

Please ask for free samples (print or PDF): **norbert.tempel@lwl.org**!

PULLMAN, CONTINUED

white workers. In 1925, they formed the Brotherhood of Sleeping Car Porters, the first successful African-American union recognized by a major corporation in the United States. Under the leadership of A. Philip Randolph, the porters began a long struggle with the company which they finally won in 1937 when the Pullman Company agreed to higher wages, improved job security, and created grievance procedures. The Brotherhood of Sleeping Car Porters remained an important force within the United States' civil rights movement until the 1960s.

Michigan Tech's IH&A faculty are excited to initiate this project because it provides a unifying study as we update and expand our graduate degree programs. During the next three years, faculty and student researchers from Michigan Technological University will prepare a white paper and two technical documents to NPS Staff, helping to develop best-practice policies for industrial heritage and partnership-style monuments and parks. In addition, MTU faculty are building collaborative relationships to expand upon our existing research capacity, building institutional relationships with allied university programs. We will demonstrate the effectiveness of community-engaged or community-led heritage research, including both digital/virtual and field-based programs, creating tools for sustainable and inclusive heritage management practice.

CHINA

SCIENTIFIC CONSERVATION AND INNOVATIVE REUSE OF INDUSTRIAL HERITAGE: 7TH CHINA INDUSTRIAL HERITAGE SYMPOSIUM

TONGJI UNIVERSITY, SHANGHAI, NOVEMBER 19-21, 2016

Liu Boying

The seminar was organized by the Industrial Architecture Heritage Academic Committee of Architecture Society of China (IAHAC of ASC), the Industrial Heritage Committee of Cultural Relics Academy of China (IHC of CRAC), the Industrial Heritage Department of Chinese Historical and Cultural City Committee (IHD of CHCCC), the School of Architecture of Tsinghua University and the College of Architecture and Urban Planning of Tongji University. More than 300 experts and scholars gathered in Shanghai from mainland and Taiwan of China, as well as the United States and other countries.

Mr. Wu Jiang, the executive vice president of Tongji University, Mr. Wu Zhiqiang, the vice president of Tongji University, and Mr. Changqing, the academician of Chinese Academy of Sciences, gave the welcoming speech respectively on behalf of Tongji University. Mr. Xiu Long, the president of ASC, Mr. Huang Yuan, the executive vice president and secretary general of CRAC, and Mr. Cao Changzhi, the vice director and general secretary of CHCCC, delivered speeches respectively on behalf of each academic organizations. Mr. Li Zhenyu, the dean of college of architecture and urban planning of Tongji University, delivered a speech on behalf of the organizer. The opening ceremony was hosted by Prof. Liu Boying from school of architecture of Tsinghua University, who is the General Secretary of IAHAC of ASC, the chairman of IHC of CRAC, the director of (IHD of CHCCC), the TICCIH Board Member and the National Representative of China.

The symposium consists of three keynote reports, including the Inheriting and Watching - The Contemporary Artisan Spirit of the Forbidden City by Mr. Shan Jixiang, the director of CRAC and the National Palace Museum, on TICCIH and Industrial Heritage on the Global Stage by Professor Patrick Martin, the president of TICCIH, and the Protection and Utilization of Shanghai Industrial Heritage by Mr. Wu Jiang, the executive vice president of Tongji University. Mr. Guo Zhan, the vice chairman and general secretary of the ICOMOS-China, Mrs. Chen Tongbin, the vice chairman of ICOMOS-China and the Chief Architect of China Architecture Design & Research Group, Mrs. Tang Yuen, nationwide Engineering survey and design master and the senior General Architect of Shanghai Xian Dai Architectural Design Group, Mrs. Lin Xiaowei, the director of the International Heritage Conservation Committee from Chung Yuan University of Taiwan, Mr. Lu Jiwei and Mr. Zhang Ming from Tongji University, Mr. Dong Wei from Southeast University, and Architect Chongxin and Wang Fang delivered thematic reports respectively. Prof. Zheng Shiling, the academician of the Chinese Academy of Sciences, also attended the symposium.

Delegates and speakers on a tour of a Shanghai steel mill during the conference.

The conference received more than 100 papers, with 40 experts and scholars making academic speeches, and achieved fruitful research results. The symposium was divided into six topics: planning and design, comparison of the domestic and international, case studies, related issues, related theories and railway heritage. Based on previous case studies and academic research, the symposium conducted a more extensive and in-depth discussion on industrial heritage from an interdisciplinary new perspective of concepts, elements to identify, values to explain, system of heritage, military heritage, rural industrial heritage, industrial architecture design offices and architects, construction technology and others, in which the field of research has been further expanded, with a comprehensive display of the latest results from the survey, research and conservation of Chinese industrial heritage.

Two study tours were organized, including Sihang warehouse, Yangpu Riverside Landscape Renovation, Yangshupu Riverside Planning Exhibition Hall, International Fashion Center, Creative Park of Fuli Garment Factory, International Industrial Design Center, Glass Museum, Elite Valley, Bund 1919, and the protection and innovative reuse of industrial heritage of Baogang, so that participants could learn of the successful experience of protection of industrial heritage in Shanghai.

At the closing ceremony, Professor Liu Boying, Professor Zhang Song, and Professor Zuo Yan summed up the conference, and held the handover ceremony of the flag of IAHAC. The next Industrial Heri-

tage Symposium of China will be held in Nanjing, Southeast University, in 2017, and Professor Li Haiqing issued an invitation to everyone.

The symposium received strong support from various media, such as Heritage Architecture, China Architectural Heritage, Industrial Construction, Time Architecture and Urban Planning Forum, the Tsinghua University press, Tongji University press and South China University of Technology press.

The protection of industrial heritage in China began in 2006, with the "Wuxi proposal" approved in forum held by the State Administration of Cultural Heritage in Wuxi, which has experienced a full 10 years. These have witnessed the fastest-growing urbanization, the most violent urban construction, and the largest industrial restructuring and upgrading in China. Also in these 10 years, the research, protection and utilization of industrial heritage has just starting out, which has received the common concern of all sectors of society.

RUSSIA

VALORISATION OF INDUSTRIAL HERITAGE: ITALIAN, EUROPEAN AND RUSSIAN EXPERIENCES

INTERNATIONAL CULTURAL FORUM, ST. PETERSBURG, DECEMBER 3, 2016

Federica Rossi, Researcher at the Kunsthistorisches Institut in Florenz – Max-Planck-Institut, visiting professor at the MARCHI Institute of Architecture in Moscow

As is well known, the USSR had its identity rooted in the working class and industrialization. Major exponents of the Russian avant-garde had taken on the architectural theme of the architecture of factories. Now, twenty-six years after the fall of the USSR, factories and entire industrial cities are in need of a second life and have much value in terms of identity, history, and architecture. The international workshop, "The Italian Day. Conservation and Valorization of Industrial Heritage: Italian and European Perspectives," was held on December 3, 2016, as part of the International Cultural Forum in St. Petersburg, a much anticipated cultural event in the Russian Federation. The workshop focused precisely on this issue, which is crucial for local identity and still quite problematic and little understood.

Twenty thousand people attended the Forum, now in its fifth edition, including 770 foreign experts and 12 ministers of culture from different countries. Opened by the President Vladimir Putin himself, the event is organized by the Russian Federation government, the Ministry of Culture, and the St. Petersburg government. The event had 14 sections (music, cinema, cultural heritage, education, dance, etc.). The workshop on industrial heritage was part of the Cultural Heritage section of the Forum, led by Oleg Ryzhkov, Director of the agency for the valorization and management of historical and cultural monuments (AUIPIK) of the Ministry of Culture of the Russian Federation.

Thanks to the initiative of the AUIPIK, I planned the meeting in order to bring together many leading scholars and industry experts. Moderated by myself, they gave different perspectives on industrial heritage, including an architect who renovates buildings, a state museum professional, and a private manager. Special attention was also given to different categories of case studies, from individual factories to company towns.

The workshop started with the introductory speeches about industrial heritage and the Italian role in conservation and valorization by Oleg Ryzhkov, the Consul General of Italy in St. Petersburg, H.E. Leonardo Bencini, and myself. Massimo Preite (Board Member of TICCIH, Italy) introduced the main issues related to the Italian industrial heritage and showed a range of case studies. Then Keith Falconer (Chairman of the Association for Industrial Archaeology, UK) outlined the methodological and historical framework of the concept of industrial heritage. Particular focus was given to several Italian examples. The redevelopment of the factory of the Lingotto in Turin, Olivetti in Ivrea, and Pirelli HangarBicocca in Milan were discussed, respectively, by Antonio Belvedere (RPBW Partner Architect, Renzo Piano Building Workshop), Patrizia Bonifazio (Politecnico di Milano), and Marco Lanata (General Manager, Pirelli HangarBicocca).

For European projects, Pi de Bruijn (Partner Architect of the Architekten Cie Studio, Amsterdam), Frédéric Panni (Director and Conservator, Familistère de Guise, France) and Claudine Cartier (Honorary General Conservator of the Cultural Heritage, France) discussed examples of restoration in France, Netherlands, and Russia that offered European points of comparison for the Italian cases mentioned above.

In Russia, the redevelopment process is in its infancy and many issues are yet to be addressed, as was noted by experts Valentina Muzichjuk (Deputy Director of the Economic Research Institute of the

Poster for industrial machines for agriculture (1931).

Russian Academy of Sciences, Moscow), Chaterine Haunina (Senior Researcher, Art History Institute, Moscow), Nina Kochelyaeva (Director, New Institute of Cultural Studies, Moscow), and Inna Krylova (Director, Shkola Nasledya, Moscow). There are, however, projects that offer grounds for optimism, such as the redevelopment of the GES-2 factory in Moscow, as discussed by Teresa Mavica (director, V-A-C Foundation, Moscow); in 2019, this project by architect Renzo Piano will become a reality and be a bridge between the Italian and Russian experiences.

As I illustrated in my talk, this connection between Italy and Russia is far from new, as there are close ties between the historic and Russian and Italian industrial architectural heritage. Italy is heavily dependent on manufacturing and is the second most industrialized country in Europe (after Germany). It can take pride in many industrial heritage redevelopment projects of great symbolic value and cultural excellence, marked by strong, distinctive identities. We should also not discount some important aims of local redevelopment, such as supporting the new sustainable, high quality tourism that Italy needs.
The intention of the workshop was to demonstrate to Russians the wealth of Italian experience in industrial archaeology - often little known - as well as a few important European experiences, with a view to constructive dialogue and international cultural cooperation.

THE INTERNATIONAL COMMITTEE FOR THE CONSERVATION OF INDUSTRIAL HERITAGE

WWW.TICCIH.ORG

CONFERENCE REPORTS

INTERNATIONAL

WELCOME TO BIG STUFF'S NEW WEBSITE!

Alison Wain

Five Big Stuff conferences on the conservation of large technology heritage have been held since 2004, and we now have a body of excellent information and papers from these conferences. The new website, **bigstuff.omeka.net**, provides a one-stop resource where you can download free copies of all these papers/presentations. The site also has a page where you can showcase your own large technology projects, and a page for sharing other resources for people working with large technology heritage. An excellent search facility means you can easily search for the key words and author names that you want to find.

Please visit us there and please use the contact page to let us know if you have a suggestion for improving the site, a resource to share, or a large technology project you would like to showcase - or if you would just like to be on our mailing list. We are a volunteer community of heritage practitioners, private owners and heritage volunteers who are connected by our interests in large technology heritage, and we would love to have your input.

The Big Stuff 2018 conference is also approaching fast and we will keep the website up to date with new developments on the event. We will also be emailing preliminary information out in the next few months if you are on our mailing list. We would love to hear from you if you have suggestions for themes or activities for the conference, so please use the contact page on the website to get in touch!

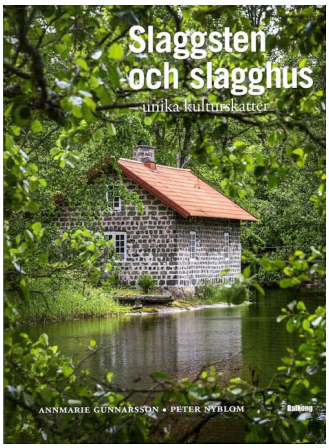
PUBLICATIONS RECEIVED

SWEDEN

A new and beautifully illustrated book presents an important but often unnoticed part of Sweden's industrial heritage. Slag stone buildings were erected in Sweden since the mid 18th century. The technique was picked up abroad, but refined and developed in Bergslagen, the ore and metals producing region of middle Sweden. During a trip to England, builder and architect Clas Eliander had picked up the idea of casting building blocks of molten slag from iron works and published several articles on the matter. In 1766 the moulding of slag blocks was introduced as one of the duties listed in the furnace master's ordinance, and thus became a part of state policies governing the production of iron. Buildings constructed in slag stone blocks withstood fire and its use was also a way of safeguarding the forests for making charcoal for the important iron making industry.

All kinds of buildings were built in this extremely durable material: the industries themselves, manors, churches, schools and workers' lodgings, and many slag stone buildings, humble or monumental, remain as an important testimony of an industrial past. The cover of the book shows the bakery of Borgviks ironworks in the county of Värmland, built at the end of the 19th century and still in use. The practice has left an important heritage, especially in the Bergslagen area, but also in other parts of Sweden. Slag blocks and slag stone buildings also occur in Great Britain, Norway, Finland and Russia.

The slag stone blocks were cast in iron moulds, fabricated on site. Making more elaborately formed buildings block, moulds in sand could also be used. The making of slag stone blocks reached its peak around 1900, but even at a highly modern steel industry as Sandvik slag stone blocks were still cast in the 1950s.



Slaggsten Och Slagghus – Unika Kulturskatter (Slag And Slag Stone Building – Unique Treasures of Heritage)

AnnMarie Gunnarsson and Peter Nyblom, Balkong förlag, Stockholm, Sweden, 216 pp., illustrated.

Swedish with a five page summary in English

In our days, slag stone building carries a compelling message of reuse and ingenuity, endurance and sustainability and the care-taking of limited resources.

Slaggsten och slagghus it is lavishly illustrated with nearly two hundred mostly new photographs of still standing slag stone buildings– as well as images showing the details of this gem-like building material rich in colour and still carrying the patterns of its red hot origins. The buildings are also marked in a map, which makes the book usable as a travel companion on travels to the industrial heritage of Sweden.

— Jan af Geijerstam

COMING SOON

INTERNATIONAL

CONFERENCES AND CONGRESSES

2017

U.K.
IHBC Annual School 2017: Historic Transport Infrastructure - The Backbone of Civilisation
22-25 June, Manchester,
www.ihbc.org.uk/branches/nwest/index.html#sthash.avfyZ11h.dpuf

U.K.
BRIDGE: The Heritage of Connecting Places and Cultures
6-10 July 2017, Ironbridge Gorge World Heritage Site, Shropshire
www.bridgeconference.wordpress.com

BRAZIL
ICOHTEC 44th annual symposium, part of the 25th International Congress of the History of Science and Technology
23-29 July, Rio de Janeiro
www.icohtec.org/annual-meeting-2017.html

U.S.A.
Our Inland Waterways: Agents of Transformation
World Canals Conference concerning the operation and maintenance of canal structures and vessels, community and economic development catalyzed by inland waterways, preservation and interpretation, and environmental issues.
Study tours will follow the Erie, Oswego, and Cayuga-Seneca canals.
24-28 September, Syracuse, New York
wcc2017syracuse.com

INDIA
ICOMOS 19th Triennial General Assembly and Annual Advisory Committee Meeting,
International Scientific Symposium on Heritage & Democracy (working title)
19-25 November, Delhi
www.icomos.org/en/about-icomos/image-menu-about-icomos/173-governance/general-assembly/3500-19th-triennial-general-assembly-delhi-2017

CHINA
8th Industrial Heritage Symposium of China, Nanjing, Southeast University

2018

CHILE
XVII TICCIH Congress, the first in Latin America.
9-12 September: visits
13-15 September: Congress, Universidad Central de Chile, Santiago.
16 September: Closure and visit to Sewell Copper mining town World Heritage Site